FUNCTIONAL CATEGORIES IN GREEK AS A SECOND LANGUAGE: EVIDENCE FOR THE FULL TRANSFER/FULL ACCESS HYPOTHESIS*

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Current research on second-language acquisition within the Principles and Parameters model has focused on the availability and nature of functional categories as well as on the role of first-language transfer and access to Universal Grammar in second-language acquisition. In this paper, we will present evidence from Greek second-language learners against the existence of a purely lexical stage and in favor of early emergence of functional categories in second-language grammars. Relevant data include the production of determiners, inflection (agreement and tense), wh-questions and embedded clauses. We argue that the empirical evidence presented in this work provides support for the Full Transfer/Full Access Hypothesis and not for the Minimal Trees Hypothesis.

1. Introduction

Research on both first-language (L1) and second-language (L2) acquisition within the Principles and Parameters model (Chomsky 1981) has focused on the availability and status of functional categories, such as Determiner (Det), Inflection (Infl) and Complementizer (Comp). In both cases, the debate has

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focused on whether functional categories are present at the onset of the acquisition process or whether they develop later. Specifically in L2 acquisition research, there are two contrasting views regarding the status of functional categories in initial L2 grammars. Vainikka & Young-Scholten (1994, 1996) put forward a Weak Continuity view on L2, according to which only lexical projections and their linear orientation transfer into the L2 initial state. Functional categories and their projections do not transfer but develop in succession during the acquisition process (The Minimal Trees Hypothesis). In contrast to Vainikka & Young-Scholten's (1994, 1996) position, a number of researchers argue for a Strong Continuity approach to L2, according to which functional projections are present from the earliest stages of L2 acquisition (Schwartz & Sprouse 1994, 1996, Epstein, Flynn & Martohardjono 1996, 1998, White 1998). There are two variants of this approach. On the one hand, Schwartz & Sprouse (1994, 1996) argue that learners transfer directly from their L1 the parametric values to their L2 (The Full Transfer Hypothesis). According to this view, the entire L1 grammar serves as an initial-stage grammar for the L2 learner, with subsequent changes in response to L2 input that interacts with Universal Grammar (UG). This view predicts that initial L2 grammars include only those functional categories instantiated in L11. Epstein, Flynn & Martohardjono (1996, 1998), on the other hand, claim that direct access to UG is available to L2 learners (The Full Access Hypothesis). This view predicts that L2 learners are not initially limited to the functional categories instantiated in the L1.

A number of studies have provided empirical evidence in favor of the early emergence of functional categories in L2, thus supporting the Full Transfer/Full Access Hypothesis (Lakshmanan 1993/1994, Gavruseva & Lardiere 1996, Haznedar 1997, Haznedar & Schwarts 1997, Grondin & White 1996). In this paper, evidence is presented from L2 Greek in favor of an early emergence of functional categories. The data presented come from (pre)adolescent Albanian speakers learning Greek as a second language. It is shown that Det, Infl and Comp are present in the early stages of L2 Greek and it is argued that this empirical evidence provides support in favor of the Full Transfer/Full Access Hypothesis and against the Minimal Trees Hypothesis. Moreover, it is claimed that some of the evidence presented in this paper supports the Full Access to UG Hypothesis and not the Full Transfer Hypothesis.

^{1.} Eubank's (1993/4) Weak Parameter Transfer Hypothesis is also consistent with the view that functional categories are present at the L2 initial state. According to this hypothesis, both functional and lexical categories transfer, however, L1 syntactic properties dependent on morphology (e.g. movement) do not transfer.

Last, it is shown that L2 Greek does not show evidence of a non-finite stage, unlike what has been argued for L1 Greek (Varlokosta, Vainikka & Rohrbacher 1996, 1998). The paper is organized as follows: In section 2, we summarize some of the arguments of the two opposing hypotheses for the L2 initial state. In section 3, we illustrate the relevant aspects of Greek and Albanian grammar. In section 4, we provide information on our subjects and methodology. In section 5, we present the results of our investigation, and in section 6, we discuss these results in light of the L2 initial state hypotheses illustrated above.

2. Theories of the L2 initial state

In this section, we will present the empirical evidence used by the two opposing views on the L2 initial state to support transfer of lexical vs. functional categories respectively.

According to the Minimal Trees Hypothesis, only lexical categories are present at the earliest stage of L2 acquisition and functional categories develop in succession. Vainikka & Young-Scholten (1996) support this claim by showing that the following properties are absent in their data:

- a. Verb raising: There is no evidence of verb raising by their Korean and Turkish L2 speakers of German, a fact indicated, according to them, by the lack of verbs preceding VP material; similarly, the preverbal position of temporal adverbs and negation presents no evidence of verb raising in their Romance L2 speakers.
- b. Auxiliaries and modals: Speakers produce basically no modals or auxiliaries at the earlier stage.
- c. The agreement paradigm: Speakers fail to inflect the verb; rather an infinitive-like form (default suffix) is used, regardless of person and number of the subject.
- d. Complementizers: None of their learners (Italian, Spanish, Turkish or Korean) produce any embedded clauses with complementizers. Vainikka & Young-Scholten (1996) put forward an even stronger claim, namely that none of the utterances in their data involve embedding even without a complementizer.
- e. Wh-movement: No wh-questions with a fronted wh-element nor any yes/no questions with a fronted verb are produced by their Korean and Turkish learners of German. Wh-questions are produced by their Romance learners, however, Vainikka & Young-Scholten (1996) claim that the presence of wh-questions does not constitute evidence

for a CP projection in the learner's L2 grammar because wh-words do not occur in Spec CP crosslinguistically.

Vainikka & Young-Scholten (1996) conclude that the subsequent acquisition of functional projections is input-driven resulting in an early underspecified functional projection (FP), which is gradually replaced by a fully specified IP/AgrP, which is in turn followed by a CP level.

However, a considerable amount of conceptual as well as empirical evidence has been presented against Vainikka & Young-Scholten's (1994, 1996) Minimal Trees Hypothesis (Schwartz & Sprouse 1994, 1996, Epstein, Flynn & Martohardjono 1996, 1998, Schwartz 1998). Here, we will focus on two studies that present empirical evidence against the Minimal Trees Hypothesis from child L2 acquisition, namely Gavruseva & Lardiere (1996) and Grondin & White (1996). Gavruseva & Lardiere (1996) present evidence from child L2 English for the early emergence of CP-related material without the overt production of elements associated with IP. More specifically, Gavruseva & Lardiere (1996) present evidence that their Russian L2 learner has acquired inversion in yes/no questions and wh-questions prior to productive overt presence of agreement, tense, auxiliaries and modals in obligatory contexts. For example, in a particular file with 18 occurrences of embedded clauses with overt complementizers, it is observed that the learner inverts auxiliaries do and be, and modal can 100% of the time, however, agreement markings are supplied in only 14% of obligatory contexts, auxiliaries or modals in declarative sentences only 41% of the time and past tense in only 32% of obligatory contexts. Furthermore, Gavruseva & Lardiere (1996) present evidence that their Russian L2 English learner produces CP clauses which are deficient in finite elements and alternate with CP clauses where all required finite material is supplied. They conclude that the CP projection is fully acquired, whereas an intermediate functional projection appears to be severely lexically underspecified. Gavruseva & Lardiere (1996) support further their claim by drawing empirical evidence from case marking. They report that all pronominal subjects found in their L2 English learner are nominative, unlike what has been reported for L1 (Vainikka 1993/4) (see also Haznedar & Schwarts 1997 for similar evidence from child L2 English). Gavruseva & Lardiere (1996) conclude that given the absence of non-nominative subjects in their L2 learner's speech and the divergence between their L2 learner and the L1 learners studied in Vainikka (1993/4), the source of this difference must be tied to the L1 knowledge of the learner, supporting a Full Transfer Hypothesis (see also Haznedar 1997 for evidence from Negation, as well as Haznedar & Schwarts 1997).

Grondin & White (1996) present evidence that Det, Infl, and probably

Comp are present in child L2 French from the earliest stages of learning. More specifically, they show consistent use of determiners, use of prenominal possessives, which are assumed to be generated under Det in French (Authier 1992), and overt case assignment in DPs by the dummy case-marking preposition de 'of' in two English-speaking children learning French as a second language. This contrasts with L1 acquisition of French, where determiners are omitted, possessives are used postnominally and de is omitted in early utterances (Friedemann 1993/4). Further evidence for the presence of functional projections in early L2 French derives from the production of IP-related elements, in particular from the existence of a variety of productively used inflected verb forms, as well as from the presence of subject clitics, which are considered to constitute overt realization of agreement. Further empirical support for the presence of the IP projection in early child L2 French comes from the placement of negation, adverbs, quantifiers and object clitics. In the French L2 data considered by Grondin & White (1996), negative markers were placed consistently to the right of tensed verbs, and adverbs as well as quantifiers, when used, were used correctly (i.e., always positioned to the right of tensed verbal forms), thus providing evidence for movement of the main verb and the existence of IP in the children's grammars. Last, the production of 'extra' object clitics not linked to an argument position was taken to provide more evidence for the existence of IP in child L2 French. The evidence regarding the emergence of CP in child L2 French appears to be not that clear (unlike the evidence in Gavruseva & Lardiere's 1996 study), however, quite suggestive. Grondin & White (1996) show that the emergence of complementizers introducing embedded clauses was a rather late acquisition in their data and that inversion of yes/no questions was also late and infrequent. However, they point out that there were no contexts for embedded clauses in their data and that, given that inversion is rare in spoken French, absence of inversion in the L2 data cannot be taken as evidence for lack of CP in the children's L2 grammars. Wh-questions, on the other hand, according to Grondin & White (1996), provide strong evidence for the presence of CP in early L2 grammars, because they are produced and comprehended in the first months of L2 acquisition. This contrasts again with L1 acquisition, where question words are often omitted altogether by learners (Radford 1990).

3. Greek and Albanian

In this section, we will review some aspects of the Greek and Albanian grammar, which will be relevant to the following discussion.

3.1. Greek

Greek is an inflectionally rich language (Clairis & Babiniotis 1998, 1999, Holton, Mackridge & Philippaki-Warburton 1997). Greek regular verbs fall into two conjugation classes. Conjugation I includes those verbs that are stressed on the penultimate syllable (e.g. *pézo* 'play'), while Conjugation II includes those verbs that are stressed on the final syllable (e.g. *aγapó* 'love') (see Clairis & Babiniotis 1999, Holton, Mackridge & Philippaki-Warburton 1997 for a description of Greek)². The agreement paradigm for the Active Voice is provided in Table 1.

Person	Sin	gular	Plural		
	1 st conj.	2 nd conj.	1 st conj.	2 nd conj.	
1st	-0	-(a)o, -o	-ome/ume	-ame/ume, -ume	
2nd	-is	-as, -is	-ete	-ate, -ite	
3rd	-i	-a(i), -i	-un(e)	-an(e)/un(e), -un(e)	

Table 1: The Greek agreement paradigm for the two conjugations in the Active Voice
(Present and Future Tense and na-constructions)

Greek is a language that makes an aspectual distinction between Perfective and Imperfective Aspect (Clairis & Babiniotis 1999, Holton, Mackridge & Philippaki-Warburton 1997, Moser 1994). The aspectual distinction shows up in the Past Tense, in the Future Tense³, and in the *na*-construction⁴. In the Present Tense there is no aspectual distinction, that is, the Present Tense

^{2.} Conjugation I includes the majority of verbs. Conjugation II is divided into two classes; the first one includes verbs characterized by the vowel a in the active present tense endings (e.g. agap-as 'you love', agap-ame 'we love'), while the second one includes verbs characterized by the vowels i and u (e.g. mis-is 'you hate', mis-ume 'we hate').

^{3.} The Future Tense in Greek is expressed by the particle $\theta\alpha$ combined with a non-past form (Perfective or Imperfective) (see Table 2). When the particle $\theta\alpha$ combines with a past form (Imperfective), it expresses a number of modalities (e.g. $\theta\alpha$ epeza 'I would play') (Clairis & Babiniotis 1999, Holton, Mackridge & Philippaki-Warburton 1997).

^{4.} In modal and other embedded contexts where languages like English use an infinitive, Greek makes use of a verb form introduced by the particle *na* and inflected for subject-verb Agreement and Aspect. This construction, referred to here as the *na*-construction, expresses formally the subjunctive in Greek. The particle *na* has typically been analyzed as a modal element (Ingria 1981, Philippaki-Warburton & Veloudis 1984, Terzi 1992, among others). Alternatively, *na* has been treated as a complementizer in some traditional grammars (Andriotis 1934), as well as in Agouraki (1991) and in Tsoulas (1993).

always uses the Imperfective stem. Table 2 illustrates the interaction of Aspect and Tense in Greek.

	Imperfective	Perfective
Present	pez-o 'I play'	n.a.
Past	e-pez-a 'I was playing'	e-peks-a 'I played'
Future	θa pez-o	θa peks-o
	'I will be playing'	'I will play'
na-construction	na pez-o	na peks-o

Table 2: The interaction of Aspect and Tense in Greek (for the verb 'play' with the Imperfective stem *pez*- and the Perfective stem *peks*-)

Greek has a definite article, which is inflected for gender (Masculine, Feminine, Neuter), number (Singular, Plural) and case (Nominative, Accusative, Genitive), and which precedes the noun (i yineka the-Fem/Nom/Sg woman-Fem/Nom/Sg 'the woman', o anoras the-Masc/Nom/Sg man-Masc/Nom/Sg 'the man'). Nouns are also inflected for gender, number and case and fall into several declensions (Clairis & Babiniotis 1998, Holton, Mackridge & Philippaki-Warburton 1997). The definite article and the noun agree in gender, number and case.

3.2. Albanian

Regular verbs in Albanian are divided into three conjugations (Newmark, Hubbard & Prifti 1982, Spyrou 1998). Conjugation I includes verbs whose dictionary form ends in a vowel or vowel cluster plus the ending -j (e.g. mësoj 'learn'). Conjugation II includes verbs that end in a consonant (e.g. kap 'catch') and Conjugation III verbs that end in a vowel (e.g. pi 'drink')⁵. The agreement paradigm for the Present Tense Indicative in the Active Voice for the three conjugations is provided in Table 3.

^{5.} Conjugations I and II include the majority of verbs, whereas conjugation III includes a small number of verbs. Each conjugation is divided into classes and subclasses (for more details, see Newmark, Hubbard & Prifti 1982).

Conjugation I	Conjugation II	Conjugation III
mëso-j	kap	pi
mëso-n	kap	pi
mëso-n	kap	pi
mëso-jmë	kap-im	pi-më
mëso-ni	kap-ni	pi-ni
mëso-jnë	kap-in	pi-në

Table 3: The agreement paradigm for the Present Tense Indicative in the Active Voice for the verbs mesoj 'learn', kap 'catch' and pi 'drink' in Albanian

Albanian seems to be less inflectionally rich than Greek. The 2nd and 3rd person in the singular number of the first conjugation are homophones. Moreover, the singular forms of the second and third conjugation are homophones too (Table 3). Thus, the agreement paradigm of Albanian marks person distinctions in the plural but not in the singular (at least for two of the conjugations).

Unlike Greek, Albanian does not make a distinction between Perfective and Imperfective Aspect. The grammatical category of Aspect is not so basic in the verbal system of Albanian, as it is in Greek. Albanian is characterized by a very rich temporal system that expresses aspectual distinctions at the same time. For example, there are five past tenses of the indicative mood: imperfect, past definite, present perfect, past perfect and pluperfect. The last three are distinguished from each other by temporal differences, but the distinction between imperfect, past definite and perfect is aspectual. The imperfect denotes a habitual action or an action in progress at a particular time in the past; the past definite represents a particular action carried out at a given moment in the past; the perfect tenses denote a general or particular action that is prior to the point of temporal reference (Newmark, Hubbard & Prifti 1982).

Unlike Greek, Albanian is characterized by enclitic definite articles. These articles bear features of number, gender and case (grua-ja woman-the/Fem/ Nom 'the woman', libr-i book-the/Masc/Nom 'the book'). Similarly to Greek, Albanian has an inflectionally rich nominal system with two genders (Masculine and Feminine), singular and plural number, and five cases (Nominative, Genitive, Dative, Accusative and Ablative)⁶.

^{6.} The existence of a neuter gender in Albanian is hard to establish because formal evidence for its existence is reduced to a limited number of words (Newmark, Hubbard & Prifti

4. The data

The data under investigation come from four L1 Albanian-speaking children learning Greek as a second language. The children are 10-14 years old, attending primary and secondary education schools in Athens. These children had no knowledge of Greek upon their arrival in Greece and their exposure to Greek at the time of the recording varied between four to six months, as illustrated in Table 4. Of the four children, only one, GF, had received after-school instruction in Greek as a Second Language for 3 months. It is important to note that the length of exposure that our subjects had to the L2 is lower that the one that Vainikka & Young-Scholten's (1996) subjects had (at least as far as their cross-sectional data is concerned, where length of exposure is available). The length of exposure of their subjects to English ranged between 1½ to 25 months. Since only 2 of their 23 subjects were exposed to English for less than 3 months and since 17 of them were exposed to English for more than 6 months, comparison of our data with their data is possible since one cannot argue that the two studies are looking at slightly different 'initial stages'.

Data elicitation took place at the learner's school and invoked one informal interview per child, with a variety of tasks designed to elicit different verbal forms and sentence types. The interview included questions designed to elicit the use of present, past and future tense. Interview questions covered topics about the child's own routines, family and school experiences. Children were also asked to describe events depicted in cartoon sequences without captions. The interview lasted about 30 minutes and was recorded on audiotape.

Child	Age	Length of residence	Sex
FE	10	6 months	M
GF	14	6 months	F
KA	12	4 months	M
SR	13	5 months	F

Table 4: Details on the Albanian L2 learners of Greek

5. Results

Our data shows that our Albanian-speaking L2 learners of Greek appear to have functional projections at the early stages of their L2 development. The supporting evidence comes from the presence of IP-, CP- and DP-related elements.

Our speakers appear to use a wide variety of verb inflections (1Sg, 2Sg, 3Sg, 1Pl and 3Pl). Most of these inflections (1Sg and 3Sg, 1Pl and 3Pl) appear in both Present and Past temporal contexts. Moreover, agreement errors are not very frequent, as shown in Table 5. Past tense (Table 6), future tense forms and embedded *na*-clauses (Table 7) are used from the initial stage of L2 development⁷, even though erratically with respect to aspectual distinctions⁸.

7. Formulaic utterances and repetitions, utterances with the copula *ime* 'be', as well as imperatives were excluded from our calculations. The copula *ime* 'be' was excluded because its conjugation is distinct from the two conjugation classes in which Greek regular verbs fall. Imperatives were also excluded, because they do not have a full inflectional paradigm (they appear only in the second person).

8. Aspectual errors are very frequent in our data (see also Moser 1996, Varlokosta & Triantafillidou 2002/in print, to appear). Some aspectual errors are illustrated in examples (1) and (5). In these examples, we observe use of Imperfective aspect instead of Perfective. However, in the majority of cases, the opposite pattern was observed, that is use of Perfective aspect instead of Imperfective. In fact, one of our speakers was producing consistently the Non-Past Perfective form (the *dependent* form, in Holton, Mackridge & Philippaki-Warburton's (1997) terminology, i.e., the form that cannot stand along but is always accompanied by modal markers such as na and θa) in Present tense contexts, such as those illustrated in (i) and (ii).

i. Interviewer: ti kanis kaθe mera sto δialima?
 what do-2Sg/Pres. every day in the interval
 'What do you do during intervals every day?'
 Child: otan exume δialima peksume
 when have-1Pl/Pres. interval play-1Pl/Perf.* (inst. of Imperf./Pres.)
 'During intervals we play'

ii. Interviewer: ti kanis kaθe proi otan ksipnas?
what do-2Sg/Pres. every morning when wake up-2Sg/Pres.
'What do you do every morning when you wake up?'
Child: sikonome sto ... to proi,
wake up-1Sg/Pres. in-the*... the morning,

fao psomi,
eat-1Sg/Perf.* (inst. of Imperf./Pres.) bread,
fiγo sti ... γia sxolio
leave-1Sg/Perf.* (inst. of Imperf./Pres.) in-the* ... for school
'I wake up in the morning, I eat bread, I leave for school'

Thus, the presence of these forms in our data, constitutes evidence for the existence of functional projections above the VP⁹.

	FE	GF	KA	SR	Total
AGR	32/39	71/80	35/47	46/52	184/218
	82%	89%	74%	88%	84%

Table 5: Agreement in obligatory contexts

	FE	GF	KA	SR	Total
T _{PAST}	3/4	18/21	2/3	4/6	27/34
	75%	86%	67%	67%	79%

Table 6: Past Tense in obligatory contexts

	FE	GF	KA	SR	Total
T_{FUTURE}	3/3	3/3	2/3	4/4	12/13
	100%	100%	67%	100%	92%
na-construction	7/7	8/8	3/4	3/3	21/22
	100%	100%	75%	100%	95%

Table 7: Future Tense and na-constructions in obligatory contexts

Examples of the tense forms used by our Albanian-speaking L2 learners of Greek are given in (1) to $(5)^{10}$.

- 1. to pe δ i ir θ e na troi [past, na-clause] the child came-3Sg prt-na eat-3Sg/Imperf.* (inst. of Perf. fai) 'The child came to eat'
- 2. to an θ ropos pi γ e eki [past, past] the-Nom/Neut* (inst. of Masc) man-Nom went-3Sg there

^{9.} Both particles na and $\theta\alpha$ have been analyzed as modal elements. Thus, we take their presence in the data to provide strong evidence for the existence of a functional projection above the VP (see section 6 for discussion).

^{10.} The symbol "*" means that the particular form is erratic/ungrammatical.

pu itan ayori that was-3Sg boy* (inst. of to ayori-the boy) 'The man went where the boy was' aftos itan enas skilo [past, past] this was a-Nom dog-Acc* (inst. of Nom) astinomikou the-Acc* (inst. of Gen) policeman-Gen kai to voiθise and it* (inst. of him) help-3Sg/Past/Perf. 'This was the policemen's dog and it (i.e. the dog) helped him' fame oli mazi [future] prt-will eat-1Pl/Perf. all together 'We will eat all together' [present, na-clause] aftos o anôra man-Acc* (inst. of Nom) this the-Nom pai na goes prt-na her-Acc* (inst. of Gen) talk-3Sg/Imperf.* (inst. of Perf.

'This man is going to talk to her'

Furthermore, there appears to be some evidence for the presence of a CP projection in our data, as shown in Table 8.

milisi)

	FE	GF	KA	SR
wh-Q	1/1	3/3	2/2	4/4
CPs ¹¹	6/6	14/14	0/0	5/5

Table 8: Embedded CPs and Wh-questions

The use of embedded *wh*-questions, as well as embedded *pu*-clauses (relative clauses) and *oti*-clauses provides evidence for the early emergence of a CP structure, unlike what has been claimed in Vainikka & Young-Scholten (1994, 1996) but in accordance with Gavruseva & Lardiere (1996). A sample of embedded *wh*-questions and CPs found in the L2 Greek data is provided in

^{11.} Na-clauses have been excluded from our calculation since we do not consider na a complementizer. Na-clauses have been analyzed as having a zero complementizer and thus as CPs (Philippaki-Warburton 1998). However, given the lack of overt material in these CPs, we decided to include in our calculation only those cases where the existence of a CP projection is signaled by the presence of an overt complementizer.

(6) to (12).

- 6. δen ksero vali* (inst. of na valo) pu to trapezi not know-1Sg where put-3Sg* (inst. of 1Sg)/Perf. the table 'I don't know where to place the table'
- 7. vlepi ti ine afto vivlio see-3Sg what is-3Sg this book* (inst. of to vivlio-the book) 'He sees what this book is about'
- vlepi 8. oti o patera see-3Sg that the-Nom father-Acc* (inst. of Nom) was there 'He sees that the father was there'
- 9. [o babas] kitai ti δiavazi [to koritsi] [the dad] look-3Sg what read-3Sg [the girl] 'He is looking what she is studying'
- 10. ine ena an θ ropo pu δiavazi is a man-Acc* (inst. of Nom) that read-3Sg/Pres. 'He is a man studying'
- 11. istoria pu exi* (inst. of ine yia) kamia (inst. of kanena) story that has* (inst. of is about) some-Fem* (inst. of Masc) meyalo piitis (inst. of piiti) big-Acc poet-Nom* (inst. of Acc) 'a story that is about a famous poet'
- 12. afto anoras this-Acc* (inst. of Nom) man* (inst. of *o anδras*-the man) pu vlepi ayori pu ine kato that see-3Sg the-Fem* (inst. of Neut) boy that is downstairs 'This man that sees the boy that is downstairs'

Further evidence for the availability of CP can be derived from the fact that our L2 learners did not have any trouble interpreting wh-questions posed to them, as illustrated in (13) and (14).

13. Researcher: ti nomizis oti kanune? what think-2Sg that do-3Pl

'What do you think they are going?'

Student: patera

father-Acc* (inst. of o pateras the-Nom father-Nom)

kita sto pedi

look-3Sg to-the* (inst. of the) child

The father looks at the child'

14. Researcher: ti ine afto pu se

δiskolevi?

what is this that you-Acc make-3Sg hard

'What is it that you find hard?'

Student:

tora mono tin

glosa

now only the-Acc* (inst. of i-Nom) language

'Now only the language'

The appropriateness of their answers suggests that these learners have the ability to interpret these structures, which might be a further indication that CP is available (see also Grondin & White 1996).

Further evidence for the presence of functional categories in L2 Greek is derived from the existence of determiners. Table 9 illustrates the proportion of definite articles in obligatory contexts¹².

FE	GF	KA	SR	Total
26/27	53/71	38/64	35/48	152/210
96%	75%	59%	73%	72%

Table 9: Definite articles in obligatory contexts

As we can observe, definite articles emerge very early in the L2 development of Greek. Moreover, they appear always pre-nominally, despite the enclitic nature of Albanian articles. Thus, this constitutes evidence for the existence of a DP projection. Further evidence for the presence of DP comes from the pleonastic use of determiners in contexts where they are not licit, as illustrated in (15) and (16).

- 15. otan exo to sxolio (inst. of *otan exo sxolio*) when have-1Sg the school (inst. of *when have-1Sg school*) 'When I have school'
- 16. Researcher.

ti δiavazis ta vraδia?

what read-2Sg the nights

'What do you read at night?'

Student:

ta vivlia

(inst. of vivlia)

the books

(inst. of books)

'Books'

^{12.} Despite the presence of overt determiners in the learners' speech, several morphological errors occur, mostly gender and case errors.

Another category related to the DP projection is object clitics. The proportion of object clitics in obligatory contexts is shown in Table 10.

FE	GF	KA	SR	Total
5/5	15/17	0/0	4/5	24/27
100%	88%		80%	89%

Table 10: Object clitics in obligatory contexts

Clitics too appear to emerge early in the development of Greek as a second language, thus providing further evidence for the presence of a DP projection in the early stages of L2 Greek. This is further supported by the presence of some instances of pleonastic clitics in the data, as shown in (17).

17. ke fiziki to exo δekatria (inst. of *ke sti fisiki exo δekatria*) and physics it have-1Sg thirteen (inst. of *and in physics have-1Sg thirtheen*)

'And in physics I have thirteen (I got thirteen)'

6. Discussion

The correct agreement pattern as well as the wide variety of tense forms attested in our data indicate that the full range of functional projections associated with Inflection is available in the initial stage of L2 Greek (see also Henry & Tangney 1996 for similar facts and conclusions on child L2 Irish, Grondin & White 1996, Haznedar 1997, and Haznedar & Schwartz 1997 for similar facts and conclusions on child L2 French). Under the assumption that a feature marked on the verb must be checked against the corresponding functional head after movement of the verb to the relevant head (Chomsky 1995), we expect that productive use of morphological markings for agreement and tense should appear on the verb only if the child has an IP (AgrS and T), because these features are checked via verb movement to the appropriate heads. Furthermore, given the productivity demonstrated in our data regarding the morphological marking of agreement, the errors observed do not indicate lack of certain functional categories. Such errors suggest that the learner has the relevant functional categories in the grammar but has not yet fully worked out how to map the abstract categories to their surface morphological representations. Therefore, our empirical evidence regarding the agreement paradigm and tense favors those hypotheses that postulate the presence of functional categories from the earliest stages of L2 development and not the Minimal Trees Hypothesis, which claims transfer of only lexical categories.

The pattern of errors we observed regarding the agreement paradigm was not very consistent. The errors observed did not occur with a particular type of predicate nor in a certain type of temporal context¹³. However, there was one interesting fact about the agreement errors, namely, they occurred only in the singular number. In particular, we observed mostly use of 2nd singular person marking for 1st or 3rd singular and use of 3rd singular for 2nd singular. The above pattern is not surprising; rather it might be suggestive of a transfer. Recall from section 3 (Table 3) that the 2nd and 3rd person in the singular number of the first conjugation as well as the singular forms of the second and third conjugation in Albanian are homophones. The fact that Albanian-speaking L2 learners of Greek tend to make agreement errors only in the singular number might be due to the lack of person distinctions in the singular in their L1, and suggests probably a direct transfer from their L1 to the L2.

A further interesting fact regarding the agreement paradigm was that we did not observe in our data use of a single default form in the cases where morphological marking was not appropriate. This indicates that L2 Greek does not show evidence of a 'non-finite' stage, unlike what has been claimed for L1 Greek (Varlokosta, Vainikka & Rohrbacher 1996, 1998). In particular, it has been observed that Greek-speaking children at an early stage overuse a verb form with the suffix -i, which corresponds to the 3rd person singular (Katis 1984, Stephany 1981, Tsimpli 1992/1996). Varlokosta, Vainikka & Rohrbacher (1996, 1998) show that this form is used over half the time (ranging from 51% to 76%) and approximately 40% of the time 'incorrectly' in non-3Sg. contexts. Moreover, Varlokosta, Vainikka & Rohrbacher (1996, 1998) observe that the majority of these overused forms are marked with Perfective aspect, as shown in (18).

18a. Adult: ke to pedaki (Spiros 1;9)
and the child-diminutive
'And the little child'
Child: opaki vali aopaki
person-diminutive put-Perf.-*3Sg person-diminutive
'I want to place/put the little person'
(lit. 'He places/puts the little person')

^{13.} Nonetheless, given that the majority of the predicates in the data were in the Present tense, most of the errors were observed with Present tense forms.

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18b. Adult: etsi? (Janna 1;11)
like-this
'Like this?'

Child: nitsi tola!
open-Perf.-*3Sg now
'(you) open (it) now!' (lit. 'She opens it now')

Child: anitsi!
open-Perf.-*3Sg
'Open (it)!' (lit. 'She opens')
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Verb forms with Perfective aspect and the suffix -i correspond to the non-finite form used to form complex sentences in Greek. Based on the lack of agreement and the predominant use of null subjects with i-forms as well as on the fact that these forms are marked with Perfective aspect, Varlokosta, Vainikka & Rohrbacher (1996, 1998) argue that they are unmarked non-finite forms corresponding to Root Infinitives in other languages. Such a pattern is not observed in our L2 data. This suggests a difference in the linguistic competence of the two populations (L1 learners and L2 learners) and indicates that the acquisition processes invoked in L1 and L2 development might be quite distinct.

Coming back to the issue of the transfer or not of functional categories in the initial state of L2 development, the presence of particles like na and θa in our L2 data provides further evidence for the existence of functional projections above the VP. In fact, the proportion of errors for future verb forms with the particle θa and for na-constructions is lower than the proportion of agreement or past tense errors (on average 8% and 5% for future and na-constructions respectively vs. 16% and 21% for agreement and past tense respectively). If we adopt Philippaki-Warburton's (1998) functional architecture, illustrated in (19), where θa and na are situated in a Mood Phrase above the IP (19a and 19b respectively), the presence of these elements in the L2 learners' data can be interpreted as strong indication for the existence of a functional projection higher than IP.

Our L2 learners produced some embedded sentences, with the complementizers oti 'that' and pu 'that'. Furthermore, they produced some

embedded *wh*-questions, with preposed *wh*-question words. The presence of these elements in our data suggests the existence of a CP projection. The omission of these words in L1 learners has been taken as evidence that L1 learners lack CP or that CP is underspecified. The fact that our L2 learners produced complementizers in their embedded structures and consistently used *wh*-phrases preposed in their embedded *wh*-questions suggests an early emergence of CP, in accordance with Gavruseva & Lardiere (1996) and contra Vainikka & Young-Scholten (1994, 1996).

Last, there is one more piece of evidence for the existence of functional categories in L2 Greek. The presence of overt definite articles as well as clitics in our L2 Greek data indicates the existence of a DP projection (see also Grondin & White 1996 for the same claim in child L2 French, Henry & Tangney 1996 for the same claim in child L2 Irish, and Prévost 1997)¹⁴.

We will examine a bit closer the evidence from the presence of overt definite articles in our data. The structure of the Greek DP we assume for our purposes here is illustrated in (20) (Horrocks & Stavrou 1987)¹⁵.

Regarding the Albanian DP, there are two proposals we are aware of. According to Taraldsen (1990) and Longobardi (1996), definite articles in Albanian (as well as in other languages with enclitic definite articles) are generated under D and their enclitic nature is interpreted as evidence for overt N-to-D movement, i.e., as evidence that N adjoins to D. Dimitrova-Vulchanova & Guisti (1998), on the other hand, propose that the article in Albanian (as well as in other languages with enclitic articles) is generated directly on N in definite noun phrases and not on D. The lexical head N moves to a functional projection, called Foc, as shown in (21), and later checks the article in D at LF. Thus, Dimitrova-Vulchanova & Guisti (1998) argue against overt N-to-D movement caused by the enclitic nature of the definite article in Albanian and propose instead a structure like (21) for the Albanian DP¹⁶.

^{14.} We are assuming here that clitics belong to the category D (Tsimpli & Stavrakaki 1998).

^{15.} Karanassios (1990) and Stavrou (1996) argue for a more elaborate structure that includes a FP projection between DP and NP ([DP D [FP F [NP N XP]]]). Their arguments for proposing a more elaborate structure are quite convincing and this structure could equally serve our purposes here. However, we maintain some reservations regarding this analysis since it assumes that definite determiners are generated as heads of the FP projection (instead of heads of the DP projection) and thus entails that the locus of +/- referentiality or +/- definiteness is not Do but Fo.

Dimitrova-Vulchanova & Guisti (1998) claim that the evidence against overt N-to-D movement is derived by the order of the head noun with respect to modifiers.

21. $[_{DP} D [_{FocP} [_{Foc} N(+Art)_i] [... t_i ...]]]$

Let us see now the consequences of these two proposals for the hypotheses regarding the initial state of L2 grammars. First, the presence of overt definite articles provides clear evidence against the Minimal Trees Hypothesis, which assumes only the presence of lexical categories in the early stages. This conclusion is valid regardless of whether we assume an analysis that generates the definite article in Albanian under D (Taraldsen 1990 and Longobardi 1996) or an analysis that generates the article on N (Dimitrova-Vulchanova & Guisti 1998). In both cases, our data is compatible only with models that assume the presence of functional categories in the initial stages of L2 development. Most importantly, it appears that the evidence from the presence of definite articles in L2 Greek provides a crucial argument for one of the Strong Continuity models, namely the Full Access Hypothesis, again regardless of the analysis one assumes for the Albanian DP. In particular, assuming the analysis advocated by Taraldsen (1990) and Longobardi (1996), it is expected under the Full Transfer Hypothesis that enclitic articles should be observed in the Greek L2 data since, under this model, L2 learners are assumed to transfer directly to L2, properties of their L1. Therefore, it is expected that Albanian-speaking L2 learners of Greek should transfer N-to-D movement from their L1 to the L2¹⁷. Under the Full Access Hypothesis, on the other hand, this is not expected since no absolute transfer of L1 properties is claimed but direct access to UG. Moreover, if one assumes Dimitrova-Vulchanova & Guisti's (1998) structure in (21) for Albanian definite noun phrases, then the presence of prenominal definite determiners in our data supports again the Full Access Hypothesis and not the Full Transfer Hypothesis. The latter hypothesis predicts that Albanian-speaking learners would project noun phrases with enclitic determiners during the initial stage of L2 development. Therefore, the presence of prenominal definite articles constitutes evidence that direct access to UG is available to L2 learners.

We conclude that the presence of elements related to IP, CP and DP functional projections in L2 Greek provides empirical support for the availability

^{17.} Notice, that, within an analysis that assumes overt N-to-D movement in Albanian DPs (Taraldsen 1990 and Longobardi 1996), the fact that our Albanian L2 learners of Greek are not producing enclitic definite articles can be also interpreted as evidence for Eubank's (1993/4) Weak Parameter Transfer Hypothesis, which is also consistent with the view that functional categories are present at the L2 initial state. According to this hypothesis, it is L1 syntactic properties dependent on morphology (e.g. movement) that do not transfer, thus N-to-D movement is expected not to transfer.

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of functional categories in the initial stages of L2 development and thus constitutes evidence against the Minimal Trees Hypothesis (Vainikka & Young-Scholten 1996) and in favor of models that assume the availability of both lexical and functional categories at the early stages of L2 (Full Transfer/Full Access models, Schwartz & Sprouse 1994, 1996, Epstein, Flynn & Martohardjono 1996, 1998).

7. Concluding remarks

In this study, we presented evidence from (pre)adolescent Albanian-speaking L2 learners of Greek that Det, Infl and Comp are present in the initial stages of L2 grammars. We argued that the presence of these elements in L2 Greek constitutes evidence against the Minimal Trees Hypothesis (Vainikka & Young-Scholten 1994, 1996) and in favor of the Full Transfer/Full Access Hypothesis, that assumes the availability of both lexical and functional categories at the early stages of L2 (Schwartz & Sprouse 1994, 1996, Epstein, Flynn & Martohardjono 1996, 1998). Furthermore, we claimed that the presence of prenominal determiners in our data is more compatible with the Full Access Hypothesis than the Full Transfer Hypothesis.

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